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ATEX
COMPOSITION COMMANDS

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CHAPTER 1 INTRODUCTION

1.1 FUNCTION OF COMPOSITION COMMANDS

Composition commands specify typographic mark-up to the ATEX system. They control:

Basic style: Type face, point size, body leading, column measure, interword spacing, and set size.

Special line endings: Quads and end-of-paragraph.

Indents: Left and right margin offsets for a paragraph, a specified vertical depth, or an entire take.

Tabular setting: Horizontal tab stops and text positioning.

Leadering.

Ragged margin setting.

Justification and hyphenation: Letter spacing, hyphen suppressing, discretionary hyphens.

Special character output: Ligatures, kerning, dropped initials, device-dependent codes.

Comments in take and visual message output.

Formats.

Composition commands are interspersed with copy in a take. The description for each command explains at what point in the copy the command is effective and when the effect is terminated.

1.2 COMMAND FORM

Line-ending (quad) and merge copy commands are single-keystroke characters on the ATEX keyboard. All other commands begin with a START COMMAND code (entered using the START COMMAND key) followed by two letters. The VDT displays the START COMMAND code as a triagle. For convenience, this manual represents START COMMAND by [.

The two letter command name is a mnemonic for the composition function. For example, cp is Change Point Size and il is Indent Left. The command name may be typed in upper or lower case.

Some commands require one or more data value after the two-letter name. When several data values are included, they must be separated by commas. Commands with data must be ended with an END COMMAND code (entered using the END COMMAND key). The VDT displays the END COMMAND code as an inverted triagle, represented by] in this manual. The END COMMAND code is unnecessary, although allowed, in commands with no values following the two-letter name.

Examples:
Commands with data values: [cp10] [cp10,12]
Commands with no data values: [xh or [xh]

1.2.1 Command Data Values

Table 1-1 summarizes data types used in composition commands. In the table, "whole number" means a number without a fractional part, e.g., 1, 12, or 798. "Decimal number" means a number containing a decimal point followed by a fractional part, e.g., 6.5 or .25. "Any number" means either a whole number or a decimal number.

The column labeled "used for" is suggested usage. In fact, you may use any data form for any command value.

Table 1-1
Composition Command Data Specifications

Data Type	Expressed As	Used For	Examples
Points	Any number	Point size Leading Horizontal distance Vertical depth	9 (nine pt.) 37.5 (37-1/2 pt.)
Picas & Points	Any number (picas), followed by p followed by any number (points, if any)	Horizontal distance Vertical depth	3p (3 picas) 10.5p (10-1/2 picas) 10p6 (10 picas, 6 points) 3p6.5 (3 picas 6-1/2 points)
Inches	Any number followed by i	Horizontal distance Vertical distance	2i (2 inches) 4.25i (4-1/4 inches)
Ems	Any number followed by m	Horizontal distance Vertical depth	2m (2 ems) 2.5m (2- 1/2 ems) .8m (8/10 em)
Lines	Any number followed by l	Vertical depth NOTE: By definition, leading for "lines" is always the mode 0 (normal display mode) leading. See "Style File."	5l (5 lines; = 50 pt if 10 pt is mode 0 leading)
Relative Units	Whole number followed by u	Horizontal distance	8u 17u
Ciceros & Didot pt.	Any number or 0 (Ciceros) followed by c followed by any number (Didot points if any)	Horizontal distance Vertical depth Point size Leading NOTE: In European systems, Ciceros & Didot points may be used wherever this manual reads points or picas & points.	12c (12 Ciceros) 12.5c (12 1/2 Ciceros) 11c6 (11 Ciceros, 6 Didot pt.) 0c8 (8 Didot pt.)

Table 1-1 (Continued)

System Variables	S1 - S10 *1	Any command	S1 S10
User Variables	V1 - V20 *2	Any command	V1 V20
Tab Positions	T1 - T40 *3	Measuring Horizontal Positions	T1 T39 T40

NOTES:

*1. S1 - Returns value of current face
S2 - Returns value of current point size
S3 - Returns value of current set size
S4 - Returns value of current leading
S5 - Returns value of current column width
S6 - Current location of baseline
S7 - Maximum positive excursion of baseline to this point within story
S8 - Arithmetic sum of user variables 19 and 20
S9 - Product of user variables 19 and 20
S10- Quotient of user variable 19 divided by user variable 20

*2. The composition system assigns a default value of 0 to all user variables.

*3. The composition system assigns a default value of 0 to all tab positions. After tabs have been set with any tab command, the tab position will be equal to the distance from the left margin of the column to the right margin of the tab position. For example, [cc12p] [tn4] [sv1,t2] will set variable 1 equal to 6 picas.

1.3 COMMAND DESCRIPTIONS

In this manual, the descriptions of each command consist of:

Form -- The two-letter command name and any data values. If the END COMMAND symbol is shown, it is required; if not shown, it is optional. Data values are shown underlined.

Function -- The action and use of the command.

Effective -- When the command has effect in the take. In this context, "line" always means photocomposer output line. After a story has been processed by Hyphenation and Justification (H&J), its lines correspond to output lines.

Terminated -- When the command ceases effect in the take.

> NOTE: Because all commands terminate at the end of take, this fact is assumed and not repeated in each description.

Notes -- Any special information about the command. For example, most commands may be typed at any point in a take, but commands that must appear at a particular place, such as the beginning of a line, are noted.

Example -- An actual usage of most commands is shown.

1.4 DEFAULT VALUES

Default values for critical composition parameters are built into the software for each installation when it is generated. Whenever a critical parameter is not specified for a take, the composition software applies its default value. Parameters with default values are noted in the text, and summarized in Appendix B, showing typical values. The exact defaults for specific installations may differ from those shown in Appendix B.

CHAPTER 2 SETTING AND CHANGING THE BASIC STYLE

2.1 BASIC STYLE

Seven elements, which must be associated with a take for H&J and typesetting, constitute the basic style:

1. Type face (font)
2. Point size
3. Stored leading
4. Column width (measure)
5. Set size
6. Oblique angle
7. Interword spacing (spaceband) values

Style elements are set and changed by the VDT (Video Display Terminal) display modes or composition commands, or both.

2.1.1 Effect of Display Mode

The ATEX VDT displays characters in eight modes:

Mode 0 = Normal (light characters on dark background)
Mode 1 = Bold (intense characters on dark background)
Mode 2 = Reverse (dark characters on light background)
Mode 3 = Reverse bold (intense dark characters on light background)
Mode 4 = Underlined normal
Mode 5 = Underlined bold
Mode 6 = Underlined reverse
Mode 7 = Underlined reverse bold

Each display mode corresponds to basic style elements 1-6 (basic style element 7 is not changed by display mode). For example, normal display (mode 0) may correspond to face 2, 9-point type, 9-point set, 10-point leading, and 11-pica measure. Bold display (mode 1) may correspond to face 3, 9-point type, 9-point set, 10-point leading, and 11-pica measure. (Assume that face 3 is the bold face of 2.) Underlined normal display (mode 4) may correspond to face 2, 24-point type, 24-point set, 30-point leading, and 23-pica measure.

To change style for a headline, the operator presses the key for mode 4, then presses the key for mode 0 to return to normal body style. To change to bold face during the take, the operator presses the key for mode 1. For many applications, the operator is not required to type any explicit mark-up commands in the take to change style.

Suppose a one-column story is set with a two-column lead paragraph. If no display mode corresponds to this style, the operator types text in normal mode, but includes an explicit command at the beginning of the take to change column width from 11 to 23 picas. (The command is [cc23p]). The other style elements for normal mode are unchanged. After the first paragraph, the operator restores the 11-pica measure using the command [cc11p].

A "style file" makes the correspondence between each screen display mode and a basic typographic style. The correspondence is user-defined and completely arbitrary. For example, bold screen display mode need not correspond to bold type face, but could be defined as an italic face or even a "notes" mode which is ignored by composition.

2.1.2 Style Files

A style file is typically used to specify the following information for a take:

1. Character Access and Width Table (CAWT) used for H&J and typesetting
2. Basic style parameters for each display mode
3. Spaceband values
4. Ragged set parameters
5. Whether hyphenation, letter spacing, kerning, and ligature formation are allowed or suppressed

Physically, a style file is a text file stored in UIC (disk area) [40,20]. The file may have any name consisting of 1-6 alphanumeric characters. Style files are typed in by the System Manager just like stories, using the new command. For example:

```
ne style1[40,20]   **EXECUTE**
```

To select the style file to be used for a take, the operator types the filename (e.g., STYLE1) in the FMT field of the screen header for the story. If no style filename is typed in the header, the software automatically uses the default style file, which is always named DEFULT[40,20]. Again, the System Manager is responsible for creating the default style file, as well as the regular style files. (There is no limit to the number of regular style files an installation may use.) The System Manager can tailor the default style file to the application. For example, if the same style is used most of the time, the default style file can contain the typical parameters to relieve the operator from typing the same style filename in each take's header. On the other hand, if virtually every take uses a different style file, the System Manager may deliberately set up the default file with outrageous parameters -- then, if the operator forgets to type the style filename in the header, the first H&J will indicate the omission.

If the CAWT, mode definitions, and other parameters just mentioned are not specified in either the selected style file or DEFULT, the built-in system default values are used.

The Machine Setup command (Paragraph 2.2.2) selects the CAWT. If used in a style file, this command must be the first entry. The styles corresponding to each display mode are defined using Define Mode commands (Paragraph 2.2.1). Almost always, the Values for Spacebands command (Paragraph 2.3.6) is included in a style file. Other commands often used in style files are:

Allow Hyphenation (8.1.2)
Cancel Hyphenation (8.1.1)
Allow Letter Spacing (8.2.2)
Cancel Letter Spacing (8.2.1)
Allow Ligatures (9.1.1)
Cancel Ligatures (9.1.2)
Allow Kerning (9.2.1)
Cancel Kerning (9.2.2)
Set Hyphenation Level (8.1.3)

The style file is processed before the take, although nothing from the style file is displayed with the copy on the screen. Although style files normally contain only commands, text is permitted. Any text in a style file would be typeset at the beginning of a take, essentially as a permanent slug line. Style files are actually special types of formats, which are described in detail in Chapter 12. It is permissible to include a Use Format command as the last command in a style file, chaining it to another format.

A typical style file:

```
[msf12]
[dm0,11,12,12,12,12p]
[dm1,13,12,12,12,12p]
[dm2,14,12,12,12,12p]
[dm3,11,10,10,10,12p]
[dm4,13,10,10,10,12p]
[dm5,14,10,10,10,12p]
[dm6,11 12,12,12,24p6]
[dm7,14,10,10,10,24p6]
[vb.3,.4,.6,1]
[vr.3,.4,.6]
[al[xk[ah[hl5,3,0]
```

2.2 STYLE SETTING COMMANDS

2.2.1 Define Mode

Form: [dmn,f,p,s,l,c,d]
where

Data Value	Means	Expressed As	Comment
n	Display mode number	Whole number (0-7)	*1
f	Face (font) number	Whole number	*2 Face nos. are assigned uniquely for each installation
p	Point size	Points (see Table 1-1)	Optional
s	Set Size	Points	Optional
l	Leading	Points	Optional
c	Measure	Picas & points Points Inches Ems	Optional
d	Degree of slant	Whole number (0-360)	Optional

NOTES:
*1. Some installations do not have numbered mode keys. For these installations, the user should obtain a list of mode numbers versus mode key labels from the ATEX Systems Engineer, e.g., Mode 0 = Roman, Mode 1 = Bold, etc.

*2. Font numbers and font layouts are assigned by the user and the Systems Engineer.

Function: Defines the basic style parameters associated with the specified screen display mode.

Special Case -- One of the eight display modes may be used for editorial notes which are ignored by the composition software. To define a mode for editorial notes, specify font 0.

Effective: Immediately

Terminated: By another [dm command, which redefines the mode

Notes: -Commas must separate data values.

-When optional data values are omitted, the commas must still be typed, unless the values are left off the end of the command.

-When optional data values are omitted, or if any of the eight modes is entirely undefined, parameters for that mode remain unchanged from their previous values. For example, if measure is undefined in a [dm command for mode 3, a change to mode 3 in a take applies the mode 3 definitions plus the measure from the current mode. If there are no previous values for undefined parameters (which happens when an undefined mode is the first one used), the built-in system default values are applied.

-Although normally used in style files, [dm commands may redefine modes in the body of a take. Only one of the eight modes may be used for editorial notes.

Examples: [dm0,3,9,9,9,11p]
(mode 0 = face 3, 9-point 9 set, 9 lead, 11-pica measure)

[dm3,15,10,10,12,23p,15]
(mode 3 = face 15, 10-point, 10 set, 12 lead, 23-pica measure,
15-degree oblique)

[dm5,0]
(mode 5 is "notes")

2.2.2 Machine Setup

Form: [msccc,vvv...]
where

ccc is a machine name (3 alphanumeric characters)
vvv... is a visual message (up to 80 alphanumeric characters)

Function: Used by installations with more than one kind of typesetter or more than one machine dressing for a given typesetter.

The machine name (ccc) specifies a Character Access and Width Table (CAWT) to the system. This name is the last part of the CAWT filename; for example, VIP is the machine name for CAWT.VIP. (See the System Manager's CAWT Guide for instructions for setting up CAWTs.)

If included, a visual message (vvv...) is punched in the output tape at the beginning of the take.

Effective: CAWT specification -- Beginning of take.
Visual output -- When tape is punched.

Terminated: Not applicable

Notes: - The visual message is optional.

-If used, the Machine Setup command must be the first information processed by the composition software, i.e., the first entry in the style file.

-If this command is omitted, the system uses the CAWT specified in the system defaults.

-To mark up copy so that it sets identically on different machines or on different dressings of the same machine, use the same face assignments in all CAWTs. For example, assume that face 1 is assigned to Times Roman in both CAWT.VIP and CAWT.F12. Then a take using [cf1] will set in Times Roman whether the style file used begins with [msvip] or [msf12].

-Warning -- Commas may not be used in visuals.

Example: [msf12,foto 1200 setup 4]

2.3 STYLE CHANGING COMMANDS

2.3.1 Change Face

Form: [cff,p,l,c]
where

Data Value	Means	Expressed As	Comment
f	Face (font) number	Whole number	Face no. selected by each installation
p	Point size	Points	Optional
l	Leading	Points	Optional
c	Measure	Picas & points Points Inches Ems	Optional

Function: Changes the type face from a previous face that was specified either by a [cf, [cp, [cl, or [cc command, or by a display mode corresponding to a style with different face. May also change point size, leading, and column measure.

Effective: Face -- Immediately
Point size, leading, measure -- See appropriate "change command"

Terminated: By another command that changes face: [cf, [cp, [cl, [cc, or [af.
By keystroke changing display mode to a style with a different face.

Notes: -Commas must separate data values when optional values are included.

-When optional data values are omitted, the commas must be typed, unless the values are left off the end of the command string.

-When optional data values are omitted, the previous values for those parameters are unchanged.

-This command must be typed in the screen display mode for which it is to apply.

Examples:

This text is set 10 on 12, in an 11-pica measure. The [cf2] Change Face [cf1] command causes an immediate font change.<-

[cf3,,14]In this paragraph, the command is used to change the stored leading to 14 points, as well as change the face. Note the extra comma in the command, because the point size is not changed.<-

2.3.2 Change Point Size

Form:

[cpp,l,c,f]
where

Data Value	Means	Expressed As	Comment
p	Point size	Points	
l	Leading	Points	Optional
c	Measure	Picas & points Points Inches Ems	Optional
f	Face (font) number	Whole number	Optional--face no. selected by each installation

Function:

Changes the point size from a previous size that was specified either by a [cf, [cp, [cl, or [cc command, or by a display mode corresponding to a style with different point size. May also change face, leading, and column measure.

Effective: Point size -- If issued at the beginning of a line, effective immediately. If issued within a line, effective immediately if the typesetter allows point size changes within output lines; otherwise effective at the beginning of the next line.

Face, leading, measure -- See appropriate "change" command

Terminated: By another command that changes point size: [cf, [cp, [cl, or [cc.
By keystroke changing display mode to a style with a different point size.

Notes: -Commas must separate data values when optional values are included.

-When optional data values are omitted, the commas must be typed unless the values are left off the end of the command string.

-If the specified point size is larger than the photocomposer's largest point size, the largest point size available is used.

-If the specified point size is smaller than the photocomposer's smallest point size, the smallest point size available is used.

-If the specified point size is nonexistent on the typesetter, the next smaller available point size is used.

-Changing point size also automatically changes the set size. (See [cs command.) However, it does not automatically change leading.

-When optional data values are omitted, the previous values for those parameters are unchanged.

-This command must be typed in the screen display mode for which it is to apply.

Examples:

Point size is changed from ten to [cp14] fourteen [cp10] points within a line. Not all photocomposers permit point size mixing. This paragraph is followed by a subhead. The Change Point Size command changes not only the point size for the subhead, but also the face and the stored leading, instead of using an Extra Lead command.<-

[cp12,18,,2]Skinning the Cat<-

[cp10,12,,1]Atex is a flexible system. Commands to change style for the subhead could have been included in the style file to define a different mode, or defined in a format and called in the take, or saved and inserted in the take using SAVE/GET keys.<-

2.3.3 Change Leading

Form:

[cll,c,f,p]
where

Data Value	Means	Expressed As	Comment
l	Leading	Points	
c	Measure	Picas & points Points Inches Ems	Optional
f	Face (font) number	Whole number	Optional--face no. selected by each installation
p	Point size	Points	Optional

Function:

Changes the stored leading applied to each line from the previous leading that was specified either by a [cf, [cp, [cl, or [cc command, or by a display mode corresponding to a style with different leading. May also change face, point size, and column measure.

Effective: Leading -- Beginning of next line
Face, point size, measure -- See appropriate "change" command

Terminated: By another command that changes leading: [cf, [cp, [cl, or [cc.
By keystroke changing display mode to a style with a different leading.

Notes: -Commas must separate data values when optional values are included.

-When optional data values are omitted, the commas must be typed unless the values are left off the end of the command string.

-When optional data values are omitted, the previous values for those parameters are unchanged.

-This command must be typed in the screen display mode for which it is to apply.

Example: Again, this text is 10 on 12. The Change Leading command changes the stored leading for the next paragraph.[cl14]<-

In justified text, it is difficult to predict line breaks before a story is processed by H&J. It is therefore safer to use the Change Leading command where a definite line break is known.<-

2.3.4 Change Column Measure

Form: [ccc,f,p,l]
where

Data Value	Means	Expressed As	Comment
c	Measure	Picas & points Points Inches Ems	
f	Face (font) number	Whole number	Optional--face no. selected by each installation
p	Point size	Points	Optional
l	Leading	Points	Optional

Function: Changes the column measure from the previous measure that was specified either by a [cf, [cp, [cl, or [cc command, or by a display mode corresponding to a style with a different measure. May also change face, point size, and leading.

Effective: Measure -- If issued at the beginning of a line, effective immediately. If issued within a line, effective at the beginning of the next line.

Face, point size, leading -- See appropriate change" command

Terminated: By another command that changes measure: [cf, [cp, [cl, or [cc.
By keystroke changing display mode to style with different measure.

Notes: -Commas must separate data values when optional values are included.

-When optional data values are omitted, the commas must be typed, unless the values are left off the end of the command string.

-When optional data values are omitted, the previous values for those parameters are unchanged.

-This command must be typed in the screen display mode for which it is to apply.

Examples: [cc22p6]This paragraph is set on a measure of twenty-two and one-half picas. At the beginning of the next paragraph, the measure will be reduced to eleven picas. This is the last sentence of the first paragraph.<-

[cc11p]This is the first sentence of the second paragraph. See how the column width has been changed? Not bad, hey? Remember to include the p for picas in the specification for measure. Without the p, the system assumes the specification is points, and the copy will probably look darned silly.<-

2.3.5 Change Set Size

Form: [csx]
where x is the set size, in points.

Function: Changes the set size from the previous value that was specified either by a [cs command, a point size change command, or a display mode corresponding to a style with a different set size.

Effective: -If issued at the beginning of a line, effective immediately.

-If issued within a line, effective immediately if the photocomposer allows set size changes within output lines; otherwise effective at the beginning of the next output line.

Terminated: -By a command that changes point size: [cp, [cf, [cl, or [cc, after which the set size is equal to the point size.

-By a keystroke changing display mode to a style with a different set size.

Notes: -This command must be typed in the screen display mode for which it is to apply.

Example: [cp10,12]This is 10 on 12, with a set size of 10 points. [cs11] Now the set size is 11 points, until the next sentence. [cp12] The point size change to 12 points has also reset the set size to 12.<-

2.3.6 Values for Spacebands

Form: [vbv,w,x,y,z]
where
v = minimum spaceband
w = desired spaceband
x = maximum spaceband before hyphenation
y = maximum spaceband before letter spacing
z = maximum allowable letter spacing

All are expressed in decimal fractions of an em.

Function: Changes the spaceband tolerances from previous values specified either by a [vb command or by the built-in system default values.

Effective: Next beginning of line.

Terminated: By another [vb command.

Notes: -All values must be included.

-The minimum band must always be less than or equal to the desired. The same relationship must also apply between the desired and the maximum before hyphenation, and between the maximum before hyphenation and the maximum before letter spacing.

Examples:

[vb.3,.5,.8,1]The minimum spaceband value (v) is the beginning of the justification range. Words will be added to the line until the spaceband size falls below "v". The system will first attempt to justify the line by dropping the last word off the line. If this causes the spacebands to exceed the threshold "x", the last word on the line will be hyphenated (if possible) and the word reprocessed using the hyphenation points as possible word breaks. The hyphenation point which sets the tightest line without oversetting the line will be chosen. If, after hyphenation, the spacebands still do not fall within the region "v" to "x", the line will be set loose.

Letter spacing, if enabled, is attempted if spacebands exceed the second threshold (y). Each character will be letter spaced up to the maximum letter space value (z) or until the bands fall below the threshold x.

On tabbed or quadded lines, spacebands are set as close to the desired value as possible, without exceeding it. On lines with no spacebands, each character will be letter spaced until the line is as close to justification as possible.<-

2.4 SPECIAL FACE CHANGES

2.4.1 Alternate Face

Form: [af

Function: Changes the current face to its alternate face. (The current face must be linked to an alternate in the CAWT. See System Manager's CAWT manual for details of setting up the CAWT to include alternate faces.)

Effective: Immediately

Terminated: -By an [nf command.

-By a command that changes face: [cf, [cp, [cl, or [cc.

-By keystroke changing display mode to a style with a different face.

Example: See Normal Face command.

2.4.2 Normal Face

Form: [nf

Function: Restores an alternate face to its corresponding normal face.

Effective: Immediately

Terminated: Not applicable

Example: Text set in [afalternate face[nf can be restored using the Normal Face command.<-

2.5 EXTRA LEADING

Form: [elxxxxx,s,pa,pb] [elxx]

Function: Specifies extra leading or reverse leading immediately, or sets the program in automatic leading mode. When in automatic leading mode, the program generates leading based upon "pb" percent of the largest point size in the last line, plus "pa" percent of the largest point size in the current line, plus the clearance specified. Extra leading affects commands in progress that have vertical distance as a parameter (events and length indentions).

[el is followed by the amount of extra leading to be applied immediately (xxxxx). If the figure is negative, reverse leading will be attempted if allowed by the device module. If the device does not support reverse leading, then the command will be ignored. If the device does not support immediate leading, the leading specified will be output at the end of the current line in addition to the normal leading for that line.

When followed by two or more data fields, [el specifies that the text is to be set in automatic leading mode. The first parameter (xxxxx) would contain the clearance to be added to the automatically calculated leading values for each line. The second parameter (s) is the switch that turns the automatic leading calculation ON (1) or OFF (0). The third and fourth parameters represent the percentage of the amount of lead to be calculated above the baseline and below the baseline respectively.

Effective: Immediately, at any time during a take.

Terminated: - Extra lead applies only on the current line.

- The automatic extra leading mode stays in effect until cancelled.

Examples: [el2,1,67,33] causes the program to generate leading with 67 percent above the baseline and 33 percent below.

[el-15] causes an immediate reverse leading of 15 points.

[el15] causes an immediate leading of 15 points. If the device cannot handle immediate leading, then the 15 points are put out with the next leading command.

```
[cp24][el.2,1,66.6,33.3]

This is line 1 in 24 pt. It is preceded by 16.2
points of lead.

This is line 2 in 36 pt. It is preceded by 32.2
points of lead.

This is line 3 in 9 pt. It is preceded by 15.2
points of lead.
```

CHAPTER 3 LINE ENDINGS

3.1 QUAD LEFT

Form: Single key on VDT -- Displays as <-

Function: Terminates line. Flushes left in column the preceding characters on the line.
If a spaceband is the first typesetting (i.e., "flashable") character after the quad left, also terminates paragraph:
Cancels any [ip or [ix indent in effect. Any additional interparagraph lead (specified by either a system default value or an [if command) is applied. If an [ih indent is in effect, the next line is set full out. If an [if indent is in effect, the indent is applied to the next line.

Effective: Immediately

Terminated: Not applicable

Notes: -Spacebands on a quadded line are set as large as possible, but are never larger than the "desired" value or smaller than the minimum. (Minimum and desired spaceband values are specified by either a [vb command or the system default values.)

-Any line not containing at least one typesetting character in addition to a quad code is ignored by the composition software, and neither sets a blank line of extra lead nor terminates a paragraph.

Example: Quad left flushes the text left. Note that a spaceband must follow in order to begin another paragraph.<-

3.2 QUAD RIGHT

Form: Single key on VDT -- Displays as ->

Function: Terminates line. Flushes right in column the preceding characters on the line.
If a spaceband is the first typesetting (i.e., "flashable") character after the quad right, also terminates paragraph.

Cancels any [ip or [ix indent in effect. Any additional interparagraph lead (specified by either a system default value or an [if command) is applied. If an [ih indent is in effect, the next line is set full out. If an [if indent is in effect, the indent is applied to the next line.

Effective: Immediately

Terminated: Not applicable

Notes: -Spacebands on a quadded line are set as large as possible, but are never larger than the "desired" value or smaller than the minimum. (Minimum and desired spaceband values are specified by either a [vb command or the system default values.)

-Any line not containing at least one typesetting character in addition to a quad code is ignored by the composition software, and neither sets a blank line of extra lead nor terminates a paragraph.

Example:
```
[cp12,30]That's News!->
[cp18]Man Bites Dog<-
```

3.3 QUAD CENTER

Form: Single key on VDT -- Displays as <->

Function: Terminates line. Centers in column the preceding characters on the line.
If a spaceband is the first typesetting (i.e., "flashable") character after the quad center, also terminates paragraph.

Cancels any [ip or [ix indent in effect. Any additional interparagraph lead (specified by either a system default value or an [if command) is applied. If an [ih indent is in effect, the next line is set full out. If an [if indent is in effect, the indent is applied to the next line.

Effective: Immediately

Terminated: Not applicable

Notes: -Spacebands on a quadded line are set as large as possible, but are never larger than the "desired" value or smaller than the minimum. (Minimum and desired spaceband values are specified by either a [vb command or the system default values.)

-Any line not containing at least one typesetting character in addition to a quad code is ignored by the composition software, and does not set a blank line of extra lead.

Example: This paragraph is terminated with a Quad Center command to center the last line in the column.<->

3.4 QUAD FROM MIDDLE

Form: Single key on VDT -- Displays as < >

Function: Terminates a line and force-justifies it in the column. If the interword gaps on the line are either all spacebands or all leader inserts and white space inserts, all the gaps are expanded equally to fill out the column, regardless of spaceband values. If the line contains both spacebands and leadering commands, the spacebands are set to the minimum value and the leaders are expanded equally to fill out the column.

If a spaceband is the first typesetting (i.e., "flashable") character after the quad from middle, also terminates paragraph:
Cancels any [ip or [ix indent in effect. Any additional interparagraph lead (specified by either a system default value or an [if command) is applied. If an [ih indent is in effect, the next line is set full out. If an [if indent is in effect, the indent is applied to the next line.

Effective: Immediately

Terminated: Not applicable

Note: Any line not containing at least one typesetting character in addition to a quad code is ignored by the composition software, and does not set a blank line of extra lead.

Examples:
```
Single line justify<>
using Quad From Middle.<>
leaders[liand white space<>
```

CHAPTER 4 INDENTS

4.1 INDENTS LASTING FOR A TAKE

4.1.1 Indent Take

Form: [itx,y]
where

x is the indent distance from the left margin, expressed as picas and points, points, ems, or inches

y is the indent distance from the right margin, expressed as picas and points, points, ems, or inches

Function: Offsets succeeding text from the left, right, or both column margins. Lasts until end of take, unless superseded.

Effective: -If issued at the beginning of a line, effective immediately.

-If issued within a line, effective at the beginning of the next line.

Terminated: An [it command specifying zero offsets will terminate the indent: [it0,0].

Notes: -Either the left or right indent may be omitted, and its previous value will be unchanged. The comma must be included when the left indent is omitted, and omitted when the right indent is omitted.

-The indents are added to any other indents in effect, except Indent Text.

-Indents are inhibited on a tabbed line.

Examples: This sentence is set full out in an 11-pica column and terminated with a quad left.<-
[it2.5p]Now an Indent Take command causes a left indent of two picas and six points. This indent lasts indefinitely, or until another Indent Take command is issued.<-

[it,2p]A second Indent Take command now supersedes the first. The left indent remains 2-1/2 picas, and a right indent of two picas is instituted. [it0,0]Now, wherever the next line starts, the indents are cancelled by a command specifying zero offsets. Text is set full out in the column.<-

4.1.2 Indent First Line

Form: [ifx,y,z]
where

x is the indent distance from the left margin, expressed as picas and points, points, ems, or inches

y is the indent distance from the right margin, expressed as picas and points, points, ems, or inches

z is the extra lead between paragraphs, expressed as points, lines, or inches

Function: Indents the first line of every following paragraph by the specified offsets from the left and right column margins. A spaceband following an end-of-line code signals the beginning of a paragraph. Other lines are not affected. Can also inject extra lead (z) between paragraphs, automatically. Lasts until end of take, unless superseded.

Effective: -If issued at the beginning of a line, effective immediately.

-If issued within a line, effective at the beginning of the next line.

Terminated: An [if command specifying zero offsets will terminate the indent and extra leading: [if0,0,0].

Notes: -Either indent or the extra leading value may be omitted, and its previous value will be unchanged. When optional values are omitted, their corresponding commas must be typed unless the values are left off the end of the command string.

-For the first line of each paragraph, the indents are added to any other indents in effect.

-Indents are inhibited on a tabbed line.

Examples:

```
[if3p,,4]
A three-pica left indent is set up for the first
line of following paragraphs in the take. This
sentence ends the first paragraph.<-

 This is the second paragraph. Only the first line
is indented; the other lines are full out. The
Indent First command specified four points of
automatic extra lead between paragraphs.<-

 This is the third paragraph. Note the required
spaceband at the beginning of each paragraph.<-
```

4.1.3 Indent Hang

Form: [ihx,y]
where

x is the indent distance from the left margin, expressed as picas and points, points, ems, or inches

y is the indent distance from the right margin, expressed as picas and points, points, ems, or inches

Function: Sets "flush and hang" paragraphs. The first line of each paragraph is set full. The second and all subsequent lines are indented,, by the specified offsets from the left and right column margins. A spaceband following a quad code signals the beginning of a paragraph.

Effective: -If issued at the beginning of a line, effective immediately.

-If issued within a line, effective at the beginning of the next line.

Terminated: An [ih command specifying zero offsets will terminate the indent: [ih0,0].

Notes: -Either the left or right indent may be omitted, and its previous value will be unchanged. The comma must be included when the left indent is omitted, and omitted when the right indent is omitted.

-For all but the first line of each paragraph, the indents are added to any other indents in effect.

-Indents are inhibited on a tabbed line.

Example: [ih3p,3p]Indent Hang is similar to Indent First, except that every line [cf2] but [cf1]the first is indented.<-

In this paragraph, both margins are indented three picas. This indent also continues to the end of take. This sentence is terminated by another end of paragraph.<-

This is the next paragraph. Again, only the first line is full out, and the remaining lines hang.<-

4.2 INDENTS LASTING FOR A SPECIFIED DEPTH

4.2.1 Indent Left

Form: [ilx ,y ,...x ,y]
where

x ,...x are vertical depth specifications, expressed as points, lines, or inches*

y ,...y are indent distances from the left margin, expressed as picas and points, points, ems, or inches*

Function: May specify 16 successive indents in one command. Each pair of (x,y) values, indents succeeding text from the left margin until the specified depth is reached. Then the next indent, if any, is applied.

Effective: -If issued at the beginning of a line, effective immediately.

-If issued within a line, effective at the beginning of the next line.

Terminated: -Each Indent - At the specified depth

-All Indents - An [il command with zero values will terminate all indents before the depth is reached: [il0,0].

Notes: -If more than one indent is specified, a comma must separate each pair of depth and indent values in addition to the comma that separates the values from each other.

-Lines of depth are computed on the basis of display mode 0 leading, regardless of the leading in effect.

-The actual depth of each indent may exceed the specification in the command, if the leading does not evenly divide the specified depth. Example: [il55,2p]would cause a left indent of two picas for 60 points (6 lines), if the mode 0 leading were 10 points.

-The indents are added to any other indents in effect, except Indent Text.

-Indents are inhibited on tabbed lines.

*In some systems x expresses the horizontal specification and y the vertical.

Examples: After this line, [il48,5p]text is left indented for a vertical depth of 48 points. The indent distance is five picas. After the vertical depth, text is set full out again. The type of indent shown in this example could be used to leave space for a small inset at the beginning of a column of text.<-

[il3l,0,5l,4p]In this example, the Indent Left command is used to create a picture runaround on the left. The command combines two indents. The runaround begins three lines into the column and lasts for five lines. The first "indent" in the command specifies a left offset of zero; it is used to count down three lines until the runaround. The second indent in the command, the runaround itself, occurs immediately after the first. It specifies a left indent of four picas, lasting for five lines.

4.2.2 Indent Right

Form: [irx ,y ,...x ,y]
where

x ,...x are vertical depth specifications, expressed as points, lines, or inches

y ,...y are indent distances from the right margin, expressed as picas and points, points, ems, or inches

Function: May specify 16 successive indents in one command. Each pair of (x,y) values, indents succeeding text from the right margin until the specified depth is reached. Then the next indent, if any, is applied.

Effective: -If issued at the beginning of a line, effective immediately.

-If issued within a line, effective at the beginning of the next line.

Terminated: -Each Indent -- At the specified depth

-All Indents -- An [ir command with zero values will terminate all indents before the depth is reached: [ir0,0].

Notes:

-If more than one indent is specified, a comma must separate each pair of depth and indent values, in addition to the comma that separates the values from each other.

-Lines of depth are computed on the basis of display mode 0 leading, regardless of the leading in effect.

-The actual depth of each indent may exceed the specification in the command, if the leading does not evenly divide the specified depth. Example: [ir55,2p] would cause a right indent of two picas for 60 points (6 lines), if the mode 0 leading were 10 points.

-The indents are added to any other indents in effect.

-Indents are inhibited on tabbed lines.

Examples:

[ir6l,0,7l,5p5]This is an example of a right indent combined with a left indent to create a runaround across two columns. This time the runaround begins after six lines and lasts for seven lines. The Indent Right command in this first column specifies an indent of zero for six lines, followed by an indent of five picas and five points for seven lines.

This mark-up example must be done in two stages, running the story through H&J to copy fit the first column, and determining the required amount of reverse lead. Assume that the first column has been fit to end after this sentence.<-

[cc23p][it12p][el-180][il6l,0,7l,5p5]Now the Indent Left command is issued in the second column, using the same values as the previous Indent Right. For illustrative purposes, this example sets the columns side by side in this take. Notice that the Indent Take of 12 picas, which left offsets the first column plus a one-pica gutter is added to the runaround indent. The vertical distance for reverse lead is known after H&J. In actual practice, the two columns would probably be set consecutively.

4.3 INDENTS LASTING FOR A PARAGRAPH

4.3.1 Indent Paragraph

Form: [ipx,y]
where

x is the indent distance from the left margin expressed as picas and points, points, ems, or inches

y is the indent distance from the right margin expressed as picas and points, points, ems, or inches

Function: Indents succeeding text from the left, right, or both column margins. Lasts until end of paragraph, unless superseded.

Effective: -If issued at the beginning of a line, effective immediately.

-If issued within a line, effective at the beginning of the next line

Terminated: -At the end of paragraph (next quad code followed by a spaceband)

-An [ip command with zero values will terminate the indent: [ip0,0]

Notes: -Either the left or right undent may be omitted, and its previous value will be unchanged. The comma must be included when the left indent is omitted, and omitted when the right indent is omitted.

-The indents are added to any other indents in effect, except Indent Text.

-Indents are inhibited on a tabbed line.

Examples: Beginning with the next line, [ip4p]the remainder of this paragraph is left indented by four picas. At the time this copy is entered, the exact line ending point is unknown. This sentence ends the paragraph.<-

This is a new paragraph, with no indent command in effect. The previous indent was cancelled automatically at the end of the last paragraph, because a spaceband was deliberately inserted after the Quad Left. To preserve the previous indent, the "paragraph" could have been terminated by an ordinary Quad Left with no following spaceband.<-

4.3.2 Indent Text

Form: [ix

Function: Causes a left indent to the horizontal position in text where the command is issued. The position is computed in the output line and therefore reflects:

-Interword and letter spacing on justified lines
-Other left indents in effect
-Tabs
-Leadering

Effective: Beginning of next line

Terminated: -At the end of paragraph (next quad code followed by a spaceband)

-By another [ix command (which resets the text indent position)

Notes: -No other left indents are recognized while a text indent is in effect

-A text indent can be reset to zero only by end of paragraph

-Indents are inhibited on a tabbed line

Examples: [cc23p]Indent Text [ixThis position is marked for a text indent. Until the end of paragraph, text is left indented under the word This. When the mark-up was done, the exact measurement for the indent position was unknown.<-

Next Example [ixThis is the second paragraph. Another Indent Text point was set as above. The second text indent supersedes the first.<-

This is the third paragraph. All indents are now cancelled.

CHAPTER 5 TABULATION

Typesetting tabular text is a two-step process:

1. Setting tab stops to define subcolumns within the measure.
2. Positioning text within the defined subcolumns on a line.

Composition commands can be used to set tab stops:

-At explicit horizontal positions relative to the left column margin.

-At an explicit position relative to the previous tab stop.

-At positions which set up a specified number of equal subcolumns.

-At positions which set up specified proportional subcolumns.

-At horizontal positions within text.

These commands merely define subcolumns and cause no tabulation of text. The number of subcolumns is always one greater than the number of tab stops. For example, one tab stop defines two subcolumnbs; three tab stops define four subcolumns. Tab stops are not accumulated; a command for setting tab stops cancels all previous stops.

Tabulation occurs line by line, and subcolumn by subcolumn within each line. Three tabulation commands position text flush left, flush right, or centered between the tab stops of a subcolumn. Tabulation commands are typed immediately following the text that they position. After each tabulation command, the system "jumps" to the next subcolumn. A Tab Jump command is available to skip subcolumns.

5.1 RULES FOR USING TAB COMMANDS

All indents are inhibited when tab stops are defined.

For each tab line, use no more than one tab command per subcolumn. The right-hand margin acts as an implied tab stop. Therefore, an extra tab command breaks the line and sets the affected text in the first subcolumn of the next line. Tabular text may be deliberately marked up in this way to break lines using tab commands, but a missing or extraneous tab command will shift the subcolumns that follow. A safer procedure is to end every tab line with a Quad Left code (following the last tabulation command). The system then returns to the first subcolumn on the following line. (The Quad Left code appears on a line by itself in the H&J file, but has no effect on the typeset output.) Not all defined subcolumns need be used; for example, the Quad Left may follow a tab command in the second of five subcolumns, breaking the line. Text in the next line may be tabbed in all five subcolumns.

It is impossible to overset a tab stop. If the text preceding a tab command is wider than the subcolumn, the text is justified (and hyphenated) within that subcolumn and the text which does not fit is set on the line below in the same subcolumn. All succeeding subcolumns will automatically vertically align with the last line of the subcolumn immediately to the left.

5.2 SETTING TAB STOPS

5.2.1 Tab Set

Form: [tsa,b,c...]

where a,b,c... are horizontal distances from the left margin, expressed as picas and points, points, ems, or inches.

Function: Sets up to 40 tab stops at the specified postions. Cancels previous tab stops. For example, in a 12-pica column [ts3p,7p,11p] sets four subcolumns: 0-3 picas, 3-7 picas, 7-11 picas, 11-12 picas.

Effective: Immediately

Terminated: -By another tab setting command: [ts, [tn, [tp, [tw, or [tx. The command [ts] will cancel all tab stop settings.

Notes: -Commas are required between tab stop specifications.

-Command must be issued at the beginning of a line.

Example: See Tab Left.

5.2.2 Tab Number

Form: [tnx]
where x is a whole number.

Function: Sets tab stops for x equal subcolumns (40 maximum). Cancels previous tab stops. For example, in a 12 pica column, [tn3] is equivalent to [ts4p,8p], setting two stops for three equal subcolumns.

Effective: Immediately

Terminated: -By another tab setting command: [ts, [tn, [tp, [tw, or [tx. The command [tn] will cancel all tab stop settings.

-By any change in the column measure.

Note: Command must be issued at the beginning of a line.

Example: See Tab Center.

5.2.3 Tab Width

Form: [twa,b,c...]

where a,b,c... are horizontal distances, expressed as picas and points, points, ems, or inches

Function: Sets up to 40 tab stops. Command values a,b,c... specify the width of each subcolumn, i.e., the distance between successive tab stops. For example, in a 12 pica column, [tw3p,6p] is equivalent to [ts3p,9p], setting stops for three subcolumns. Cancels previous tab stops.

Effective: Immediately

Terminated: -By another tab setting command: [ts, [tn, [tp, [tw, or [tx. The command [tw] will cancel all tab stop settings.

Notes: -Commas are required between width specifications.

-Command must be issued at the beginning of a line.

Example: See Tab Right.

5.2.4 Tab Proportion

Form: [tpa,b,c...]

where a,b,c... are whole numbers

Function: Sets tab stops for up to 40 subcolumns. Command values a,b,c... specify the proportional widths of the subcolumns relative to each other. For example, [tp2,1,3] sets two tab stops so that the first subcolumn is twice as big as the second, and the third is three times as big as the second. In a 12 pica measure, this command is equivalent to [ts4p,6p]. In an 18 pica measure, the same command is equivalent to [ts6p,9p]. Cancels previous tab stops.

Effective: Immediately

Terminated: -By another tab setting command: [ts, [tn, [tp, [tw, or [tx. The command [tp] will cancel all tab stop settings.

-By any change in the column measure.

Notes: -Commas are required between subcolumn proportions.

-Command must be issued at the beginning of a line.

Example: See Tab Left.

5.2.5 Tab Text

Form: [tx

Function: Sets a tab stop at the horizontal point in text where the command is issued. The output line, including indents, justification, or leadering, determines the text position. Up to 39 [tx commands may be issued per line.
Cancels previous tab stops, except those set by other [tx commands on the same line.

Effective: Beginning of next line

Terminated: -By another tab setting command: [ts, [tn, [tp, or [tw.

Note: [tx may only be used on justified or quadded lines to set tab stops. The command is ignored on tabular lines, i.e., lines containing [tl, [tr, or [tc commands.

Example: See Tab Center.

5.3 POSITIONING TEXT

5.3.1 Tab Left

Form: [tl

Function: Positions the text preceding the command (and following any previous tabulation command) flush left in the current subcolumn. Jumps to beginning of next subcolumn.

Effective: Immediately

Terminated: Not applicable

Notes: -Must follow the text to be tabbed.

-Spacebands on a tabbed line are set as large as possible, but are never larger than the "desired" value or smaller than the minimum. (Minimum and desired spaceband values are specified by either a [vb command or the system default values.)

-May not be issued within a word.

Example: Box scores: ten subcolumns, plus one subcolumn for "gutter."

```
[cc11p,,6,6]
[ts3p,3p9,4p3,4p9,5p3,5p9,8p9,9p6,10p,10p6]
Rose 3b[tl5[tr1[tr2[tr0[tr[tlCooper
1b[tl5[tr0[tr0[tr0[tr<-
```

Same subcolumns, set using [tp:

```
[tp12,3,2,2,2,2,12,3,2,2,2]
Cncpcion ss[tl6[tr0[tr1[tr0[tr[tlFisk
c[tl4[tr2[tr2[tr1[tr<-
```

5.3.2 Tab Right

Form: [tr

Function: Positions the text preceding the command (and following any previous tabulation command) flush right in the current subcolumn. Jumps to beginning of next subcolumn.

Effective: Immediately

Terminated: Not applicable

Notes: -Must follow the text to be tabbed.

-Spacebands on a tabbed line are set as large as possible, but are never larger than the "desired" value or smaller than the minimum. (Minimum and desired spaceband values are specified by either a [vb command or the system default values.)

-May not be issued within a word.

Example: Same box score: setting the column headings.

```
[cc11p,,6,6]
[tw3p,9,6,6,6,6,3p,9,6,6]
[tlab[trr[trh[trbi[tr[tl[tlab[trr[trh[trbi[tr<-
```

5.3.3 Tab Center

Form: [tc

Function: Centers in the current subcolumn the text preceding the command (and following any previous tabulation command). Jumps to beginning of next subcolumn.

Effective: Immediately

Terminated: Not applicable

Notes: -Must follow the text to be tabbed.

-Spacebands on a tabbed line are set as large as possible, but are never larger than the "desired" value or smaller than the minimum. (Minimum and desired spaceband values are specified by either a [vb command or the system default values.)

-May not be issued within a word.

Examples: Box score again: centering the team headings.

```
[cc11p,,6,6]
[tn2]
CINCINNATI[tcBOSTON[tc<-
[tw3p,9,6,6,6,6,3p,9,6,6]
[tlab[trr[trh[trbi[tr[tl[tlab[trr[trh[trbi[tr<-
Rose 3b[tl5[tl1[tl2[tl0[tl[tlCooper
1b[tl5[tl0[tl0[tl0[tl<-
```

Grocery ad, using Tab Text to create a subcolumn for centering:

```
[cc23p,,12,12]
CHICKENS[tx[li$1.29<-
[cp8,8]Best Buy[tc<-
```

5.4 SKIPPING SUBCOLUMNS

A [tl, [tr, or [tc command immediately following another tabulation command (with no intervening text) will skip a subcolumn. Sucessive tabulation commands will skip several subcolumns. Examples were given under Tab Left and Tab Right.

Alternatively, the Tab Jump command may be used to skip subcolumns.

5.4.1 Tab Jump

Form: [tjx]
where x is a whole number.

Function: Jumps to subcolumn number x. (Subcolumns are numbered beginning with 1.)

Effective: Immediately

Terminated: Not applicable

Notes:

-The subcolumn number in the command is the destination for the jump, not the number of subcolumns skipped.

-The subcolumn number in the command must be greater than the number of the subcolumn in which it is issued, else the command is ignored.

-Within a line, [tj should immediately follow a [tl, [tr, or [tc command. If no tab command precedes it, [tj forces a [tl command to terminate the current word and subcolumn.

Example: Box scores header line again:

```
[cc11p,,6,6]
[ts3p,3p9,4p3,4p9,5p3,5p9,8p9,9p6,10p,10p6]
[tj2]ab[trr[trh[trbi[tr[tj8]ab[trr[trh[trbi[tr<-
```

CHAPTER 6 LEADERING

Leaders may be inserted instead of white space on tabbed or quadded lines. Leadering is not automatic; you must mark each leadering "gap" in a column (quadded line) or subcolumn (tabbed line). The gaps are expanded equal amounts with leader characters to fill the column or subcolumn. Note that as a leadered column or subcolumn is filled, the leader gap expansions, not the quad or tab commands, position the surrounding groups of text. On a leadered line, quad or tab commands merely mark the end of a line or subcolumn; all quad commands are equivalent and interchangable, as are all tab commands.

Leader characters may be:

-Any Character Sequence -- Specified either by a Define Leader command* or by system default values. Leaders are inserted at every gap marked by a Leader Insert command. The maximum length for a defined leader sequence is part of the system defaults.

-En Leaders -- Inserted at every gap marked by an En Leader command. May be used instead of Leader Insert.

-White Space -- Inserted at every gap marked by a White Space command; allows expansion of white space in the same column or subcolumn as other leadering.

*Some typesetters will not support multiple character leadering. Each customer should consult his typesetter manual to determine what is supported on his machine.

6.1 DEFINE LEADERS

Form: [dlccc...]

where ccc... is a character string

Function: Defines the string ccc... as the leader characters for the Leader Insert command. The string is at least one character long; the maximum number of characters is an installation constant. This command is a definition only and causes no leadering itself. Subsequent [dl commands may redefine leaders.

Effective: Immediately

Terminated: By another [dl command

Notes: -A [dl command may be included in a style file to define standard leaders for all takes using that style.

-May not be issued within a word.

Example: See Leader Insert.

6.2 USING LEADERS

6.2.1 Leader Insert

Form: [li

Function: Marks the point on the line at which the command is issued for expansion with leaders defined in a previous [dl command. If no leaders are defined, system default leaders will be inserted. The line must contain tabulation commands or a quad code.

Effective: Marking Insert Point -- Immediately
Leader Expansion -- At next tab command or quad code.

Terminated: Not applicable

Notes: -The font, point size, and set size of the leader string correspond to the style of the last typesetting character preceding the [li command. In other words, neither the mode of the [li command nor the mode of the [dl command that defined the leaders affects the leadering style. To set leaders in a style different from the surrounding text, type a thin space or Fixed Space command (e.g., [fs1u]) in the desired mode, before the [li command.

-May not be issued within a word.

Examples:
```
[dl-]Leader is[lihyphen<-
[dl*][licenter[li<-
left[li<-
[liright<-
```

6.2.2 En Leaders

Form: [ln

Function: Marks the point on the line at which the command is issued for expansion with en leaders. Useful when another character sequence is defined for Leader Insert. The line must contain tabulation commands or a quad code.

Effective: Marking Insert Point -- Immediately

Terminated: Not applicable

Notes: -The font, point size, and set size of the leader string correspond to the style of the last typesetting character preceding the [ln command. In other words, the mode of the [ln command does not affect the leadering style. To set leaders in a style different from the surrounding text, type a thin space or Fixed Space command (e.g., [fs1u]) in the desired mode, before the [ln command.

-May not be issued within a word.

6.2.3 White Space

Form: [ws

Function: Marks the point on the line at which the command is issued for expansion with white space. Useful when other "gaps" are expanded with leaders. The line must contain tabulation commands or a quad code.

Effective: Marking Insert Point -- Immediately

Terminated: Not applicable

Note: May not be issued within a word.

Example: [tp2,1]Index[li[tlPage[ws41<-

CHAPTER 7 RAGGED SET

Copy may be set in any of three ragged (unjustified) styles:

1. Ragged left/flush right
2. Ragged right/flush left
3. Ragged center (both left and right margins ragged)

Letter spacing and hyphenation are applied as usual on ragged lines, unless explicitly disabled by an [xl or [xh command. Indents are honored. Quad commands typed within ragged copy will terminate a line. However, the left or right positioning of the text is determined by the ragged command.

7.1 CONTROLLING THE RAGGED STYLE

7.1.1 Values for Ragged Copy

Form: [vrw,x,y,z]
where

w is the ragged line minimum spaceband size, expressed as a decimal fraction of an em.

x is the ragged line desired spaceband size, expressed as a decimal fraction of an em.

y is the ragged line maximum spaceband size before hyphenation, expressed as a decimal fraction of an em.

z is a horizontal offset, expressed as picas & points, points, ems, or inches.

Function: All parameters are optional. If any parameter is omitted, its value from either a previous [vr command or the system defaults is applied. For the ragged copy only, spaceband tolerances supersede values from any previous [vb command. When ragged set is cancelled, the former spaceband values for justified copy are reactivated until additional ragged copy is set.

Including the offset parameter (z) exaggerates the ragged appearance of subsequent lines, as described for [rl, [rr, and [rc commands.

Effective: Immediately

Terminated: By another [vr command

Notes: -Spaceband values have a similar effect to [vb values on quadded lines: the bands are set as large as possible, but never larger than the "desired" or smaller than the minimum. As a result, ragged copy appears more ragged as the desired spaceband size is set closer to the minimum, and less ragged as the desired size approaches the maximum.

-When values are omitted, the commas must be typed, unless the values are left off the end of the command string.

-The minimum band must always be less than or equal to the desired. The same relationship must also apply between the desired and the maximum before hyphenation.

Examples: See Ragged Center, Ragged Left, Ragged Right.

7.2 SETTING RAGGED COPY

7.2.1 Ragged Left

Form: [rl

Function: Sets subsequent copy flush right with a ragged left margin.
If the offset parameter was included in a previous [vr command or in the system defaults, white space equal to the amount of offset is added on the left of alternate lines. The result is a more ragged appearance.

Effective: Immediately

Terminated: - By an [xr command

- By [rr or [rc

Examples: [rlThese lines are set ragged left. The right margin is still justified. The interword spacing may be changed by a Values for Ragged command. Ragged set may be cancelled by the Cancel Ragged command.<-

[vr.35,.35,.8,1p]Ragged left is still in effect, but in this paragraph a [vr command adds a one-pica offset to every other line for exaggerated raggedness.<-

7.2.2 Ragged Right

Form: [rr

Function: Sets subsequent copy flush left with a ragged right margin.
If the offset parameter was included in a previous [vr command or in the system defaults, white space equal to the amount of offset is added on the right of alternate lines. The result is a more ragged appearance.

Effective: Immediately

Terminated: - By an [xr command

- By [rl or [rc

Example: [cc12p][rrThese lines are set [ip2p]ragged right and flush left. The indent does not affect the ragged right margin. Hyphenation is applied if necessary.<-

7.2.3 Ragged Center

Form: [rc

Function: Sets subsequent copy with ragged left and right margins. Each line is centered in the middle of the column.

If the offset parameter was included in a previous [vr command or in the system defaults, white space equal to the amount of offset is added to every line. The offset is staggered left and right on alternate lines. The result is a more ragged appearance.

Effective: Immediately

Terminated: - By an [xr command

- By [rl or [rr

Examples: [vr.35,.35,.8][rcThis is a ragged center example. Both margins are ragged. The Values for Ragged command sets spaceband values to .35 em for both minimum and desired, and eight-tenths of an em for maximum before hyphenation.<-

[xrNow ragged mode is cancelled. Both margins are justified. In the next paragraph, ragged center is invoked again, this time including an offset.<-

[vr.35,.35,.8,1p][rcRagged center now sets ragged right and left margins. Spaceband values are unchanged, but the Values for Ragged command includes a one-pica offset. The offset is applied on the left of one line and the right of the next, causing the exaggerated raggedness.<-

7.2.4 Cancel Ragged Set

Form: [xr

Function: Ends any ragged style in effect. Subsequent copy is justified.

Effective: Immediately

Terminated: By [rl [rr, or [rc

Example: See Ragged Center.

CHAPTER 8 HYPHENATION AND JUSTIFICATION

8.1 HYPHENATION

8.1.1 Cancel Hyphenation

Form: [xh

Function: Cancels hyphenation until the end of take, unless countermanded by an [ah command.

Effective: Immediately

Terminated: By an [ah command

Note: The system defaults specify whether hyphenation is initially allowed or cancelled.

Example: See Allow Hyphenation

8.1.2 Allow Hyphenation

Form: [ah

Function: Restores hyphenation, if previously disabled by an [xh command or the system defaults.

Effective: Immediately

Terminated: By an [xh command

Note: The system defaults specify whether hyphenation is initially allowed or cancelled.

Examples:
```
[xhHyphenation is now cancelled.<-
The employment of sharp instrumentation for the objective of manipulating this encapsulation generates a considerable probability for degradation of the integrity of the inherent material.<-
Translation: USE NO HOOKS.<-

[ahNow hyphenation is allowed.<-
The employment of sharp instrumentation for the objective of manipulating this encapsulation generates a considerable probability for degradation of the integrity of the inherent material.<-
Translation: USE NO HOOKS.<-
```

8.1.3 Hyphenation Level

Form: [hlx,y,z]

where x is the hyphenation level desired.

5 or blank - Allow hyphenation using any hyphen including algorithmic

4 - Allow dictionary hyphens of levels 4, 3, or 2, but not algorithmic hyphens
3 - Allow dictionary hyphens of levels 3 or 2, but not algorithmic
2 - Allow only dictionary hyphens of level 2

y is the maximum number of allowable consecutive computer hyphens. If y consecutive lines are hyphenated, the y+1st line will not be hyphenated by the computer.

z is the allow hyphenation of widows command. If z is zero, the system will allow hyphenation of words terminated by tab left, tab right, tab center, quad left, quad right, quad center or quad middle. If z is non-zero, the system will not allow hyphenation of such words.

Function: Sets the style of hyphenation to be allowed within a story.

Effective: At next word break

Terminated: At next [hl command

8.1.4 Discretionary Hyphen

Form: Single key on VDT -- Displays as ..

Function: Defines permissible hyphenation points in a word. Discretionary hyphens are typed directly in text, but never appear in the output. Words containing discretionary hyphens may only be hyphenated at the indicated points, or not at all. A discretionary hyphen immediately before the first letter of a word disables hyphenation for that word.

Useful for forcing hyphenation points in homographs, proper nouns, and other words for which the system may generate incorrect or unfortunate word breaks.

Effective: Immediately

Terminated: Not applicable

8.2 JUSTIFICATION

8.2.1 Cancel Letter Spacing

Form: [xl

Function: Disables letter spacing until the end of take, unless countermanded by an [al command.

Effective: Beginning of the line in which the command appears.

Terminated: By an [al command.

Note: The system defaults specify whether letter spacing is initially allowed or cancelled.

Examples: [xlDisabling letter spacing increases the size of space bands on justified lines. The space band threshold for letter spacing is controlled by the last parameter in the Values for Space Bands command. Letter spacing disables ligature formation and kerning.<-

[alDisabling letter spacing increases the size of space bands on justified lines. The space band threshold for letter spacing is controlled by the last parameter in the Values for Space Bands command. Letter spacing disables ligature formation and kerning.<-

8.2.2 Allow Letter Spacing

Form: [al

Function: Restores letter spacing, if previously disabled by an [xl command or the system defaults.

The [vb command specifies the maximum spaceband threshold past which letter spacing is applied to a line. (If omitted from the [vb command, a system default value is used.) The letter spacing increment is the typesetter's smallest escapement unit. Sufficient increments to justify a line are applied equally to each spaceband and character of width.

Effective: Beginning of the line in which the command appears.

Terminated: By an [xl command.

Notes: -The system defaults specify whether letter spacing is initially allowed or cancelled.

-Letter spacing automatically disables ligature formation and kerning.

Example: See Cancel Letter Spacing

8.2.3 Fixed Space

Form: [fs*x*]

where x is a width, expressed as picas and points, points, ems, inches, or relative units

Function: Inserts the specified width of fixed space at the point on the line where the command is issued.

Effective: Immediately.

Terminated: Not applicable

Note: Negative fixed space is permitted, and may be used to manually kern characters not prescribed in the automatic kerning pairs set up in the CAWT. Example: [fs-5u]. This command should be typed in the mode from which the desired spacing should come.

Example: "Slug" of three ems inserted[fs3m]here.<-

CHAPTER 9 SPECIAL CHARACTER OUTPUT

9.1 LIGATURES

9.1.1 Allow Ligatures

Form: [ag

Function: Causes ligatures to be formed automatically from the successive character combinations: fl, fi, ff, ffl, and ffi. Ligature output characters must be defined in the current font.

Effective: Immediately

Terminated: By an [xg command

Notes: -Ligatures are not formed if a hyphen must be interposed between the characters in order to justify a line.

-Letter spacing disables ligatures.

-The system defaults specify whether ligature formation is initially allowed or disabled.

Example: See Cancel Ligatures.

9.1.2 Cancel Ligatures

Form: [xg

Function: Disables ligature formation if previously enabled by [ag or system defaults.

Effective: Immediately

Terminated: By an [ag command

Note: The system defaults specify whether ligature formation is initially allowed or disabled.

Examples: [xl[xgThe final fluctuations affected the effluent efficiency.

[agThe final fluctuations affected the effluent efficiency.

9.2 KERNING

9.2.1 Allow Kerning

Form: [ak

Function: Pairs of characters that may be kerned together are predefined for each font in the Character Access and Width Tables (CAWTs -- See System Manager's CAWT Manual). Following this command, kerning pairs are detected and kerned automatically, according to the relative unit specifications in the CAWT.

Effective: Immediately

Terminated: By an [xk command

Notes: -Characters are not kerned if a hyphen must be interposed in order to justify a line.

-Letter spacing disables kerning.

-The system defaults specify whether kerning is initially allowed or disabled.

Examples:
```
[cp10,24]<-
[akTrapped People Perish->
[cp20]<-
WAVES WASH AWAY L.A.<-
[cp10,24]<-
[xkTrapped People Perish->
[cp20]<-
WAVES WASH AWAY L.A.<-
```

9.2.2 Cancel Kerning

Form: [xk

Function: Disables kerning if previously enabled by [ak or system defaults.

Effective: Immediately

Terminated: By an [ak command

Note: The system defaults specify whether kerning is initially allowed or disabled.

Example: See Allow Kerning

9.3 DROPPED INITIAL

Form: [dil,f,p,v,i,j]
where

l is any letter (usually captial)
f is a whole number specifying a font
p is a point size, expressed in points
v is a vertical depth, expressed as points, lines, or inches
i,j are indent distances from the left margin, expressed as picas and points, points, ems, relative units, or inches

Function: Drops a large initial letter and automatically sets smaller body copy around it on the right. The initial letter is l, it comes from face f, and its point size is p. (The current style is unaffected.) The depth of the inset is v. The first line of body copy is left indented around the inset by distance i. Subsequent lines of body copy are left indented by j, until the depth v is reached. Then the body is set full out.

Effective: Immediately

Terminated: Not applicable.

Notes: -Must be issued at the beginning of a line.

-The two left indents and the inset depth can be measured from a specimen of the particular character set in the desired dropped initial point size.

Example: [cp9,10,,1][diD,2,20,18,17,19]ROPPED initial letter D in an 18-point inset. The letter is 20 point, from face 2. The indent for the first line is 17 points. The indent for the second line is 19 points.<-

9.4 OBLIQUE

Form: [ob*x*]

where x is a whole number of degrees, 0-360.

Function: On photocomposers capable of setting oblique type, causes all following text to be slanted by x degrees. Lasts until superseded.

Effective: Immediately

Terminated: By the command [ob0]

9.5 OUTPUT DEVICE CODE

Form: [odx1,x2,...x20]

where x1,...x20 are decimal numbers, 0-255.

Function: For passing up to 20 codes through the composition system to a typesetter, without processing. Used to issue special commands directly to the device. Must be used with care.

Imbeds the decimal numbers x in the output, at the point of the command. Has no effect on H&J.

Effective: Immediately.

Terminated: Not applicable

Example: This command is used to pass codes through the composition system directly to the typesetter, or to issue special device-dependent commands such as draw rule or cut paper directly to a typesetter.

CHAPTER 10 COMMENTS AND VISUALS

10.1 COMMENT

Form: [co*aaa...*]

where aaa... is a string of (up to 80) characters

Function: No effect on typesetting. The command, usually containing a message, is stored in the take. May be used to include comments without using one of the eight display modes for "notes." Any number of [co commands may be used. This command should always be typed on a line by itself.

Effective: Not applicable

Terminated: Not applicable

Example:
```
[coa crook if I ever saw one]
The retired government official was seen recently in
the Florida Keys. Comments [colike this] don't appear
in the output. [cofortunately]<-
```

10.2 PUNCH VISUAL

Form: [pvaaa...]

where aaa... is a string of characters

Function: The character string aaa... is punched as a visual message on the output paper tape, at the point in the take where the command is issued. This command should always be typed on a line by itself.

Effective: When the output tape is punched.

Terminated: Not applicable

Notes: -Only one Punch Visual command is permitted per output line

-Warning -- Commas may not be used in visuals.

Example: [pvhold for Sunday]<-
Reliable government officials predict the end of the world in four hours.

CHAPTER 11 SET VARIABLES

11.1 SET VARIABLES

Form: [svxx,aa...vv]

Function: The function signifier [sv is followed by from 2 to 21 data fields. The first data (xx) represents the starting variable number at which the following values are to be set. The next 1-20 fields, each separated by a comma, represent values that are stored at the next consecutive variable. The instruction must be terminated by a command end key. Used to set the value of variables 1 through 20 to be used in later commands.

Effective: Immediately. At any time during the take.

Terminated: -When a new value for the variables in question is specified by an [sv command, [uf use format command, or a [gf get format command.

-At end of take.

Example: [sv15,11p,4]
Would set Variable number 15 equal to 11 picas and Variable 16 equal to 4.

11.2 DO CONDITIONAL

Form: [dcuuu,vvv,xxx,yyy,zz]

Function: The function signifier is followed by five data fields. The first data field (uuu) contains a value to be tested. The fifth data field (zz) is the identifier (v1-v20) for a variable to be set. If the first data field (uuu) is negative, the variable specified by the fifth data field (zz) will be set to the value in the second data field (vvv). If the first data field is zero, the variable will be set to the third data field (xxx). If the first data field is positive, the variable will be set to the value in the fourth data field.

Effective: Immediately

Terminated: N/A

Example: [sv19,v1,-v2][dcs8,1,2,3,v5]
[gfv5]...
In this example s8 will be set to the difference between v1 and v2. Variable 5 will then be set to 1, 2, or 3. One of three formats will be called. If v1 equals v2, format 2 will be called. If v1 is greater than v2, format 3 will be called.

11.3 MEASURE TEXT

Form: [mtxx,string of text]

Function: The function signifier [mt is followed by two data fields. The first data field is an integer designating a user variable (1-20) which will be set equal to the character width of the second data field. If the first data field is blank, then the program will output a fixed amount of space equal to the width value of the characters specified in the second data field. The instruction must be terminated by an end command key.

Effective: Immediately

Terminated: N/A

Example: [mt12,NOW]...
This command would cause variable 12 to be set to the width of the word NOW.

CHAPTER 12 FORMATS

12.1 OVERVIEW

A format is a stored package containing composition commands, text, or both. Each format has a name, which is used within a take to call (insert) the format.

Physically, each format is a disk file. Format files are stored in UICs [40,20], [40,22], or at the user's option, in other UICs. A format file may have any legal ATEX filename (1-9 alphanumeric characters). In a take, a format is called by using its filename as the first argument to the Use Format ([uf) command, Get Format command, Get Format at Event command, or other special formats.

Formats may be shared by all users and may be used simultaneously by several users.

Although a format is logically inserted in text, the contents of a format file does not appear on the screen.

Text in a take may be logically merged with commands in a format, using the Merge Copy command (described in Paragraph 12.6). The Merge Copy command acts like a switch between a format and text in a take. When a Merge Copy "switch" occurs in a format, the format is temporarily suspended and the text provides the input to the composition system. In the text, the reverse occurs; Merge Copy switches back to the suspended format for composition input. In effect, the Merge Copy commands allow a format to be read by the composition system in a piecemeal fashion: first part of the format is processed, then text from the take, then the next part of the format, and so on.

Formats may be "chained" -- that is, one format may end with a Use Format command which calls another format. Or, formats may be "nested"--that is, a format accessed by a Use Format command may be temporarily suspended by a Get Format command. When the Get Format is terminated, the Use Format is re-invoked at the first character after the point of suspension.

12.2 USE FORMAT COMMAND

Form: [uffilename,aa,xx,yy,...]

where filename is the name of the called format file in UIC [40,20].

NOTE: (Optionally, the filename may be a full file name of the form DEV:filename[uu/vv] where "DEV:" is any legal random access device; "filename" is any name up to 9 characters in length, and [uu/vv] is a UIC. aa is an integer from 1 to 20 representing a user variable to be defined. xx,yy are from 1 to 20 values to be stored in successive user variables starting with the variable specified by aa.

Function: Terminates any format in use. Begins processing the specified format. If the format file includes one or more Merge Copy commands, format processing is suspended after a Merge Copy command, until a corresponding Merge Copy command in text resumes format processing at the point of interruption.

Effective: Immediately

Terminated: -At the end of the format file or next Use Format command.

-By another Use Format command.

Example: See Chaining Format

12.3 GET FORMAT COMMAND

Form: [gffilename,aa,xx,yy,ww,zz]

where filename is the name of the called format file in UIC [40,20]

NOTE: Optionally the file name may be a full file name of the form DEV:filename[uu/vv], where "DEV:" is any legal random access device; "filename" is any name up to 9 characters in length and [uu/vv] is a UIC. aa is an integer from 1 to 20 representing a user variable to be defined. ww,zz represent from 1 to 20 values to store in user variables aa through aa+20, respectively.

Function: Terminates any "Get Format" in use. If a "Use Format" is in use, the "Use Format" is suspended until the end of the "Get Format", at which time the "Use Format" is reactivated at the point following the "Get Format" call.

Effective: Immediately

Terminated: -At the end of the format file

-By another Get Format command or Use Format command

Examples: Assume there is a format called level1, which contains [cp10][mc [gflevel2][cp10], and a format called level 2 which contains [cp30][mc. Then you typeset the following story:

[uflevel1]Little words[mc Big words[mc Little words

which will look like:

Little words Big words Little words

12.4 GET AT EVENT COMMAND

Form: [gexx,yy,zz,ww]

Function: The function signifier [ge is followed by 1 to 4 data fields. The first, xx, represents the event number. The second, yy, represents the format name to be invoked at the event. The third field, zz, represents the depth of the column at which time the event will be invoked and the fourth, ww, represents the depth of the column at which time the event will be cancelled. If field 4 is negative, the event will not end until the end of take or short. The command must be ended by a command end key.

To cancel an event, you need only specify the event number, e.g. [ge1].

Event Number	Event
1.	Beginning of line
2.	Beginning of paragraph
3.	End of line
4.	End of paragraph

Effective: At the first occurrence of the event after the depth specified in argument 3.

Terminated: After depth is exceeded or at the next [ge command for the given event.

Example:
```
[sfpara][cl0][li][cl10][ef
[ge4,para,0,]
```
This example of get at event causes a line of leader dots to be drawn after every paragraph.

.....

This is the second paragraph and illustrates the rule drawing again.

.....

12.5 RESTART FORMAT COMMAND

Form: [rf or [rf]

Function: The function signifier [rf is the complete command. Used to specify to the program that the format currently being executed is to be restarted. The exact effect depends on where the command is placed.

The command causes a merge from text to the currently active format. All merges within the format will be ignored until the next end of use format or next use format command. (If no use format is active, merges will be ignored until the end of get format.)

The purpose of this function is to insure synchronization with the format even when keying errors either cause too many or too few merge copy commands. The technique recommended is to mark-up each line to end with this command instead of the usual merge copy command. This will prevent the loss of an entire take, which can occur if a single take is under control of a single format and a keying error is made early in the take.

Effective: Immediately

Terminated: Not Applicable

12.6 MERGE COPY COMMAND

Form:	Either single character or [mc
Function:	-In a Format File -- Switches input to the take when encountered during format processing. -In a Take -- Switches input back to the prevailing format. (Ignored if no format file is being processed.)
Effective:	Immediately
Terminated:	Not applicable.
Notes:	-Line-ending decisions in the merged text should not affect those in the format file and vice versa.
Example:	See Chaining Formats

12.7 CREATING AND CHANGING FORMAT FILES

ATEX composition does not require a "Store Format" command. A permanent format file may be created by the System Manager exactly like a story.
For example,

```
ne format123[40,20]  **EXECUTE**
```

To change a format file, logon to the format area and call it up like a story. Remember, formats are common to all users.

A format file may contain any combination of commands and text. It is critical that any text in a format file stand by itself (i.e., not depend on the take for line-ending decisions). To insure that the format text is free-standing, H&J every format file containing text before it is called by Use Format command for the first time. In format files with text and Merge Copy commands, it is important to position typesetting commands so the text in the format H&Js properly. It may be necessary to include extra typesetting commands with text in a format file, so the text is not H&Jed according to commands intended for merged copy from the take.

12.7.1 STORE FORMAT

Form: [sffilename]

Function: This command is used to store text and/or typesetting commands on the disk in the temporary format specified by "filename." If a format of the same name already exists, it will be replaced by the new format. All text and commands (see exceptions below) between the "Store Format" command and the next "End Format" command or end of take will be stored in the format. Formats stored in this manner are automatically deleted at the end of the job which stores them.

Effective: Immediately

Terminated: At next [ef end format or at the end of take.

Example: [sftitle]How to use formats [ef...
The information "How to use formats" is stored in the format title.

Notes: Merge copy commands, [mc, typed within a Store Format are not stored. They are executed exactly like a merge copy outside a Store Format. If you wish to store a merge copy, insert a store merge command, [sm.

12.7.2 STORE MERGE

Form: [sm

Function: This command is used within a store format command to store a merge copy code.

Effective: Immediately

Terminated: N/A

Example: [sftitle]How to [sm use formats [ef...
The format title will contain the data "How to [mc use formats."

12.8 RELATIONSHIP OF FORMATS TO THE STYLE FILE

The style file is a special case of a format file. Applied to a take, it is either the file named in the header or DEFULT[40,20], if none is specified in the header.

A style file is handled slightly differently from a format by the composition system:

The style file is processed automatically at the beginning of the take, without an explicit call. It is accessed at the "Use Format" level.

Names of style files are restricted to the size of the format field in the header. In addition, style files must be on the system device and must be in UIC [40,20].

12.9 CHAINING FORMATS

The Use Format command is acceptable not only in a take, but also in a format file itself. If the last command in a format file is Use Format, then the next format is called automatically and the formats are said to be "chained." (Note that it is only meaningful to include a Use Format command at the end of a format file. Because this command terminates any format in use, anything following it in a format file would never be processed.)

One use of chaining is to restore the basic style parameters, which may have been changed by [cc-type commands in the format. This is accomplished by chaining a format to the style file format, e.g., ending a format with [ufdefult] or, as explained later, [st.

Another use of chaining is "looping" a format: chaining it to itself. For example a box score format "boxscr" might be:
[cc11.5p,3,6,7][mc[tl[mc[tl[mc[tr[mc[tr[mc[tr[ufboxscr]

This format would be called in text as follows:
[ufboxscr]Carbo[mc4[mc0[mc2[mc1[mcDoyle[mc4[mc2[mc3[mc2[mc...etc.

!
!
!

FORMAT LOOPS HERE

If a take ends under control of a looping format, the end-of-text mark following the last Merge Copy in text terminates processing.

If a looping format only controls part of the text, and is followed by other text which is set differently, you must prevent the format from looping on itself indefinitely. To escape from the format, "merge" another Use Format command instead of text in the take. The second Use Format command will terminate the looping format. (Remember, Use Format terminates any other Use Format.) The second format may merge additional text or simply be a call to the style file. For example,
...Burleson[mc3[mc0[mc1[mc0[mc[ufstyle][el12]Summary:<-

12.10 SPECIAL "USE FORMAT"CALLS FOR HEADLINES AND BYLINES

Headline formats usually contain style-changing commands and Merge Copy commands (for the headline text). Byline formats can contain style-changing commands and text ("by" author).

Headline and byline format calls are special because the composition software automatically processes the style file again, and then processes the headline or byline format file. There are two main advantages:

1. Headline and byline formats can be written to change only some of the basic style parameters, e.g., point size and leading. Such formats are usable in all takes, regardless of the particular style file in effect.

2. Headlines and bylines can be set anywhere in the take. If they are set after some copy, and the copy changed some style parameters via [cc-type commands, the special processing restores the original style file parameters.

The differences in using headline and byline format calls are:

-Commands [hd and [by are recognized instead of [uf. These commands are described in Paragraphs 12.10.1 and 12.10.2 respectively.

-The headline and byline format files must be created by the System Manager in UIC [40,22] instead of [40,20].

After a headline or byline, the style usually reverts to that specified in the style file. The command [st is provided for this purpose. It is equivalent to a Get Format command which calls whatever style file is in the header FMT field. According to preference, the mark-up person may either include the [st call at the end of the headline or byline format (following the last Merge Copy from text), or call for an [st command in the copy immediately following the headline/byline format call. This command is described in Paragraph 12.11.6.

12.10.1 Use Headline Format

Form: [hd*filename*]

where filename is the name of the headline format file in UIC [40,22].

Function: Processes the style file,then calls the specified headline format file. Exactly equivalent to:

[st[uffilename]

Effective: Immediately

Terminated: At the end of the headline format file.

Example: Assume headline format "2[40,22]" contains:

```
[cc34p,2,36,40][mc<->
[mc<->
[st
```

Then the copy might contain:

```
blah blah blah<-
[hd2]Programmer Runs Amok;[mcBugs Injure 7[mc
```

12.10.2 Use Byline Format

Form: [byfilename]

where filename is the name of the byline format file in UIC [40,22].

Function: Processes the style file,then calls the specified byline format file. Exactly equivalent to:

[st[uffilename]

Effective: Immediately

Terminated: At the end of the byline format file.

Example: Assume byline format "craig[40,22]" contains:

```
[cc11.5p,2,8,9]By Craig Cervo<->
[afCub Reporter<->
```

Then the copy might contain:

```
blah blah blah<-
[bycraig][st<-
```

12.11 SPECIAL"GET FORMAT" CALL ABBREVIATIONS

Several special-purpose formats are used frequently: FRactions, SUperior digits, INferior digits, TeleVision, and SuperShift. The system allows these formats to be called using their format names as commands without the preceding "gf."

To take advantage of this feature, the names of all formats called using this shorthand must begin with FR, SU, IN, TV, SS, or ST. The "commands" are described in the following paragraphs.

12.11.1 Get Fraction Format

Form: [frrestnam]

where restnam (up to seven characters) is the rest of the format name. The format file is stored in UIC [40,20], as usual.

Function: Exactly equivalent to [gffrrestnam].

Effective: Immediately

Terminated: At the end of the format file.

Example: [fr14]

12.11.2 Get Superior Format

Form: [surestnam]

where restnam (up to seven characters) is the rest of the format name. The format file is stored in UIC [40,20], as usual.

Function: Exactly equivalent to [gfsurestnam].

Effective: Immediately

Terminated: At the end of the format file.

Example: [su4]

12.11.3 Get Inferior Format

Form: [inrestnam]

where restnam (up to seven characters) is the rest of the format name. The format file is stored in UIC [40,20], as usual.

Function: Exactly equivalent to [gfinrestnam].

Effective: Immediately

Terminated: At the end of the format file.

Example: [in4]

12.11.4 Get Television Format

Form: [tvrestnam]

where restnam (up to seven characters) is the rest of the format name. The format file is stored in UIC [40,20], as usual.

Function: Exactly equivalent to [gftvrestnam].

Effective: Immediately

Terminated: At the end of the format file.

Example: [tv4]

12.11.5 Get Supershift Format

Form: [ssrestnam]

where restnam (up to seven characters) is the rest of the format name. The format file is stored in UIC [40,20], as usual.

Function: Exactly equivalent to [gfssrestnam].

Effective: Immediately

Terminated: At the end of the format file.

Example: [ss4]

12.11.6 Get Style File Format

Form: [st

Function: Calls the style file. Exactly equivalent to [gffilnam], where filnam is the six-character name of the style file that appears in the story header.

Effective: Immediately

Terminated: Not applicable.

Notes: -The command does not require an END COMMAND code, and the name of the style file is not used.

-Although usually associated with the end of headline or byline processing, [st may be used anywhere in a take. Typical uses might be to revert to the original style after a series of [cc-type commands, and to terminate a looping format.

Examples: See [hd and [by.

CHAPTER 13 VERTICAL JUSTIFICATION

13.1 OVERVIEW

Vertical justification is the process of expanding or contracting a justified story to fit an available depth, by adding or subtracting small amounts of leading to the existing leading at selected points. ATEX vertical justification is accomplished by using one of the following methods:

1. Carding, or inserting extra lead between lines
2. Leading expansion between paragraphs
3. Secondary leading point expansion

The vertical justification style must be set up in the style file, or at the beginning of the text file by using a [vc, [vp, or [vl command to set the values for carding, paragraph leading, or secondary leading, respectively. The vertical justification program is set up so that one command, or any combination of these commands justifies the file.

13.2 SET VALUES FOR CARDING

Form: [vcP,T,M]

where

P = The order in which carding is to be used to vertically justify the file. If P= 0, carding will not be used at all. P = 1, 2, or 3 means try carding first, second, or third, with respect to interparagraph or secondary leading.

T = The minimum amount that your typesetter will lead.

M = The maximum amount of carding that any line is to receive, in any units acceptable.

Function: This command is used to set the priority, resolution, and maximum allowable carding.

Effective: Immediately

Terminated: At next values for carding command.

Example: [vc2,.5,1]
Assigned carding a priority of 2, the minimum carding increment is 1/2; the maximum allowable carding is 1 point per line.

13.3 SET VALUES FOR PARAGRAPH LEADING

Form: [vpP,T,M]

where

P = The order in which paragraph leading is to be used to vertically justify the file. If P = 0, paragraph leading will not be used at all. P = 1, 2 or 3 means try paragraph leading first, second, or third, respectively.

T = The minimum amount that your typesetter will lead.

M = The maximum amount of paragraph leading that any paragraph is to receive, in any units acceptable.

Function: This command is used to set the priority, resolution, and maximum allowable paragraph leading.

Effective: Immediately

Terminated: At next values for paragraph leading command.

Example: [vp3,.5,1]
Assign interparagraph leading a priority of 3, the minimum increment of interparagraph leading is 1/2 point, the maximum amount of interparagraph leading is 1 point.

13.4 SET VALUES FOR SECONDARY LEADING

Form: [v1P,T,m,M]

where

P = The order in which secondary leading is to be used to vertically justify the file. If P= 0, secondary leading will not be used at all. P = 1, 2 or 3 means try secondary leading first, second, or third, respectively.

T = The minimum amount that your typesetter will lead.

m = A number representing the number of points per point of supplied secondary lead that can be subtracted to compress a file. For example, if m = .5, up to half of the supplied leading can be subtracted at each point to squeeze the file.

M = A number representing the number of points per point of supplied secondary lead that can be added at a secondary leading point to expand the text file. For example, if m = 1.5, up to one and a half times the supplied leading can be added at each secondary leading point to justify the file.

Function: This command is used to set the priority, resolution, and maximum allowable secondary leading.

Effective: Immediately

Terminated: At next values for secondary leading command.

Example: [v11,.5,.9,1]
Assign secondary leading a priority of 1. The mimimum increment of secondary leading is 1/2 point; user entered secondary leading values may be compressed up to 90%, or expanded 100%.

13.5 SET DEPTH TO VERTICALLY JUSTIFY

Form: [vjD]

where D is the depth to which the block is to be justified.

Function: This command is used to designate the beginning of a block of text to be vertically justified and to specify the depth to which that block is to be justified.

Effective: Immediately

Terminated: At next [ej] command.

Example: [vj12i]

13.6 VERTICAL END

Form: [ej

Function: Marks the end of a vertically justified block.

Effective: Immediately

Terminated: N/A

Example: [ej

13.7 SECONDARY LEADING

Form: [slL]

Function: This command is used to insert extra lead into a story and to mark the extra lead eligible for either expansion or contraction to achieve a vertically justified story. "L" is the amount of leading that will be inserted if no expansion or contractions is necessary. In this case, the command is exactly equivalent to an extra lead command ([elL]). If "L" is omitted, e.g., [SL], no leading will be inserted. If expansion or contractions, is required a "machine inserted leading" command will be inserted by the vertical justification program to force the expansion or contractions. This command has the form [mlL] where "L" is the amount of lead to add or subtract. If all secondary leading commands have been omitted the leading (e.g., [sl], the machine leading to justify the story will be equally distributed over all points.

APPENDIX A

ALPHABETICAL INDEX TO COMMANDS

APPENDIX B SYSTEM DEFAULTS

DEFAULT	TYPICAL VALUE	COMMAND REFERENCE
CAWT File	CAWT.VIP, CAWT.F12, CAWT.APS, CAWT.VDS, etc.*1	ms
Font for Undefined Mode	1	dm
Point Size for Undefined Mode	6 points	dm
Set Size for Undefined Mode	6 points	dm
Leading for Undefined Mode	6 points	dm
Measure for Undefined Mode	20 picas	dm
Oblique for Undefined Mode	0 degrees	dm
Minimum Spaceband Value	22 relative units	vb
Desired Spaceband Value	38 relative units	vb
Maximum Spaceband Value Before Hyphenation	55 relative units	vb
Maximum Spaceband Value Before Letter Spacing	88 relative units	vb
Interparagraph Lead	0 points	if

NOTES:

*1. Defines device, unit and name of default character access and width file.

APPENDIX B SYSTEM DEFAULTS, CONT.

DEFAULT	TYPICAL VALUE	COMMAND REFERENCE
Leader Character	. (period)	dl, li
Characters in Leader String	1	dl, li
Font for Leader Characters	1	dl, li
Point Size for Leaders	6 points	dl, li
Set Size for Leaders	6 points	dl, li
Ragged Copy Minimum Spaceband	22 relative units	vr
Ragged Copy Desired Spaceband	38 relative units	vr
Ragged Copy Maximum Spaceband	55 relative units	vr
Ragged Copy Offset	0 points	vr
Hyphenation Enabled?	yes	ah
Ligatures Enabled?	yes	ag
Letter Spacing Enabled?	no	al
Kerning Enabled?	no	ak

APPENDIX C H&J MESSAGES

The Hyphenation and Justification (H&J) program displays two kinds of blinking messages relating to composition on the screen: Error messages and information messages. Error messages begin with two asterisks and indicate conditions that must be corrected. Information messages are single letters with no asterisks, indicating lines that H&J fits in an extraordinary way. The messages are:

BLINKING MESSAGE	MEANING	REMEDY
**U (appears within command)	Undefined command (usually a typographical error)	Correct command.
**B (appears at beginning of line)	Beginning of line error: either the line begins with a character from an undefined CAWT; or indents specified for the line exceed the column width.	Insure Machine Setup command in style file requests proper CAWT. If the line begins with a Change Face command, insure the face is defined. Check indents.
**F	File error. H&J cannot read or write a file. If message appears within format command, H&J cannot open format file.	For format error, insure that the proper format file is in [40,20], or that the proper headline or byline format is in [40,22]. Otherwise may be hardware error.
**C (appears after each character in error)	CAWT file error. H&J attempted to access character from non-existant CAWT.	Insure Machine Setup command requests proper CAWT. Insure Change Face-type commands request face defined for current CAWT.

APPENDIX C H&J MESSAGES,continued

BLINKING MESSAGE	MEANING	REMEDY
**A (appears within command)	Argument error. The value, or argument, in a command is wrong because: 1. It is the wrong type. For example, a fraction instead of a whole number -- [cf3.5]. 2. It is too large or too small -- [cc10p][ts11p]. 3. It has more than four digits after a decimal point.	Correct command.
**E	Premature end of file. Story ends in the middle of a command.	Correct command.
**O	Overflow. Text and commands for a single output line exceed H&J's internal buffer size. (Message appears at beginning of next line.	Shorten the output line (for example by increasing point size, decreasing measure, or rearranging composition commands).
**T	Tight line. Single word or portion thereof is forced onto line, even though it oversets.	Change line editorially, or increase measure
L (appears at end of line)	Loose line. Spacebands exceed specified maximum. Line is letter spaced, if enabled.	Information. (Line may be editorially changed for different fit)
T (appears at end of line)	Overset tab column. Column is justified and remaining text is placed in same column on next line	Information column or text may be changed.

APPENDIX C H&J MESSAGES, continued

BLINKING MESSAGE	MEANING	REMEDY
H (appears at end of line)	Algorithmic hyphen. The hyphen at the end of the line was not derived from the dictionary.	Information. (Hyphenation point may be changed by discretionary hyphen)

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